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DOCKET NO. 01-S-016 (STMI01-00021)
SERIAL NO. 09/943,837
PATENT

REMARKS

Claims 1-20 are pending in the application.

Claims 1-20 have been rejected.

CLAIM REJECTIONS -- 35 U.S.C. § 103

Claims 1-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over what the Examiner characterizes as "Applicant's admitted prior art" (hereafter "APA") in view of *Citta et al.* (U.S. Patent No. 5,602,595), hereinafter "Citta".

The "Background of the Invention" section of the application as filed describes conventional MPEG-2 compression. In particular, it describes the MPEG-2 packetized elementary stream (PES) on page 7, including that the PES includes packet header 405, optional PES header 410, and associated packet data 415. Packet header 405 comprises packet start code prefix 420, stream identifier (ID) 425, and PES packet length indicator 430. All of the fields after PES packet length indicator 430 are optional.

Because the PES includes numerous optional fields, it is in no way a "fixed-size program packet" as described in independent claims 1, 6, 11, and 18. Nothing in the background section of the specification, which the Examiner characterizes as "admitted prior art," describes reformatting PES packets of disparate size into fixed-size program packets, as required by each independent claim.

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The Examiner now suggests that Citta discloses a suitable fixed-size program packet. Citta describes a system that encodes variable length elementary streams of data into a multilevel symbol signal comprising a plurality of multiplexed fixed length data packets without sync information. The fixed length data packets are arranged in fields of repetitive data segments, each of which includes a data segment sync and each field of which includes a field sync.

Claim 1 requires that each of the received PES packets is reformatted into at least one fixed-size program packet having a header and a payload, the header defining a payload content. This is not taught or suggested by the art of record.

In particular, while Citta includes a fixed-length packet, the header of Citta's packet does not define the payload content, as claimed. Citta discloses a packet having a 4 byte header at the beginning of the packet, with the first byte of the header being the MPEG sync byte. The header also includes a 13 bit packet identifier (PID). Citta also discloses a packet having a 3 byte header and a 184 byte payload. Citta does not teach or suggest a fixed-length packet having a header and payload, where the header defines the payload content, as required by claim 1. As such, claim 1 clearly distinguishes over any combination of APA and Citta, as do dependent claims 2-5.

The Examiner now suggests, first, that "one of ordinary skill in the art would readily recognize that the purpose of a header is to define and handle the payload". As a general statement, this is simply incorrect. In many cases, a packet header is simply used for routing purposes, with no definition of the payload content, as claimed. Indeed, Citta itself is a perfect example of a packet having a header and a payload, where the header does not define the payload. As such, it is clear that

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this specific characteristic of a header is not inherent, as it is not necessarily present in any given header.

Second, the Examiner refers to the specification as filed. Page 7, line 14 – page 8, line 12 of the specification as filed describes:

... By contrast [*to the MPEG-2 Standard*] FIGURE 4 illustrates a conceptual block diagram of a PES (generally designated 400) according to an exemplary embodiment of the prior art.

Packetized elementary stream (PES) 400 comprises packet header 405, optional PES header 410, and associated packet data 415.

Packet header 405 comprises packet start code prefix 420, stream identifier (ID) 425, and PES packet length indicator 430. In accord herewith, all of the fields after PES packet length indicator 430 are optional. PES header 410 includes a presentation time stamp (PTS) field, a decoding time stamp (DTS) field, an elementary stream clock reference (ESCR) field, a elementary stream (ES) rate field, a DSM trick mode field, a copy information field, a prior PES clock recovery field, an extension field, and stuffing bytes.

Packet start code prefix 420 provides packet synchronization. Stream ID 425 provides packet identification and payload identification. PTS/DTS flag fields 435 and PTS/DTS fields 440 provide presentation synchronization. Data transfer is provided through the packet/header length 445, payload 415, and stuffing fields 450. Scramble control field 455 facilitates payload de-scrambling.

As above, the only header field described as specifically regarding the payload is "Stream ID 425", that provides "payload identification", distinct from the claimed "defining a payload content". Further, there is no teaching or suggestion that the header fields of the packets discussed in APA has any relation to the packets or payloads of the packets described in Citta. There is no teaching, suggestion, or motivation to modify Citta's packet structure to include any headers as described in APA, nor is there any indication that such a combination would even be operable. The Examiner

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does not even attempt to discuss the implications, viability, or desirability of so modifying Citta's header – the Examiner simply refers to "the header" as if every header of every packet anywhere were universally identical.

Claim 3 requires that the fixed size of said at least one fixed-size program packets is a multiple of a sector size of said storage disk. This feature is not taught or suggested by APA or Citta, alone or in combination, and the Examiner erroneously states that some relevant teaching is found in APA. The Examiner's response does not even attempt to identify any such teaching, but simply indicates that a "storage disk, DVD or hard disk" has sectors. The Examiner also alleges that "it would be obvious to one of ordinary skill in the art, to have at least one fixed-size program packets is a multiple of a sector size of said storage disk, in order to increase the recording capacity." This statement is unsupported in any cited art. Certainly nothing in the art of record, or in the knowledge of one or ordinary skill in the art, teaches or suggests specifically setting the size of a fixed length program packet to a multiple of a sector size of a storage disk. If the Examiner believes this is a well-known technique, and is taking such official notice, the Examiner is requested (and therefore required) to provide documentary support for the same.

Claim 4 requires that the header of each fixed-size packet defines at least one of stream type, timing information and picture information. This feature is not taught or suggested by APA or Citta, alone or in combination, and the Examiner erroneously states that some relevant teaching is found in APA. Nothing in APA teaches such a fixed-size packet, that is a reformatted disparate-sized PES packet, as claimed.

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Claims 6 and 11 requires a digital video recorder, a storage disk, and storing fixed-size program packets into a multiplexed program stream in the storage disk. This feature is not taught or suggested by APA or Citta, alone or in combination, and the Examiner erroneously states that some relevant teaching is found in APA. Nothing in APA teaches reformatting disparate-sized PES packets fixed-size program packets and storing the fixed size program packets into a multiplexed program stream in a storage disk, and nothing in Citta discusses storing anything at all. Dependent claims 7-10 and 12-17 similarly distinguish over a combination of APA and Citta.

Claim 18 includes similar limitations as claims 6 and 11. This feature is not taught or suggested by APA or Citta, alone or in combination, and the Examiner erroneously states that some relevant teaching is found in APA. Nothing in APA teaches storing fixed size program packets into a multiplexed program stream in a storage disk, and nothing in Citta discusses storing anything at all. Dependent claims 19-20 similarly distinguish over a combination of APA and Citta.

The Examiner makes the odd statement that “[i]t would have been obvious to one of ordinary skill in the art to store the fixed-size program packet in a multiplexed program stream in the storage disk, in order to efficiently compress and transmit the audio/video data.” Not only is this unsupported in the art, but the alleged “motivation” appears to suggest that after storage, the audio-video data is retransmitted somewhere. This is not found or discussed in the cited art at all, and the Examiner is invited to show any basis for this statement prior to appeal.

Because each independent claim includes limitations not found in any cited art, and not described or in any way “admitted” by the Applicant as prior art, all independent claims and their

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respective dependent claims should be allowed over all art of record.

Further, the Examiner's general statement of motivation for combining APA and Citta is unsupported in the art. The Examiner states "it would have been obvious ... to modify the prior art by reformatting the PES packets into fixed length packets in order to increase the efficiency of transmitting data." This motivation is not found or supported in the art, and is not generally correct. There is no showing at all that the fixed-length packets are more efficient for transmitting data. In fact, to produce fixed-length packets from variable-length packets, generally speaking, additional padding bits must be used – thereby increasing the number of bits that must be transmitted and correspondingly decreasing transmission efficiency.

All rejections are traversed.

Applicant denies any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Applicant reserves the right to submit further arguments in support of their above stated position as well as the right to introduce relevant secondary considerations including long-felt but unresolved needs in the industry, failed attempts by others to invent the invention, and the like, should that become necessary.

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CONCLUSION

As a result of the foregoing, the Applicant asserts that the remaining Claims in the Application are in condition for allowance, and respectfully requests an early allowance of such Claims.

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at wmunck@munckbutrus.com.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

MUNCK BUTRUS P.C.

Date: Nov 28, 2006



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